

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,800	04/16/2001	Asit Dan	YOR920010007US1	6067
35526	7590	06/18/2004	EXAMINER	
DUKE. W. YEE YEE & ASSOCIATES, P.C. P.O. BOX 802333 DALLAS, TX 75380			BANANKHAAH, MAJID A	
		ART UNIT	PAPER NUMBER	
		2127		

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/835,800	DAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Majid A Banankhah	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 30 January 2004.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-30 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All   b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.

## DETAILED ACTION

1. This office action is in response to application filed on April 16, 2001. Claims 1-30 are considered for examination.

### *Claim Rejections - 35 USC § 103*

2. Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesaint et al. (U.S. Pat. No. 6,578,005, hereinafter Lesaint) and Kaufer (U.S. Pat. No. 6,519,763, hereinafter Kaufer).

Per claims 1, 11, and 21, a method of actively scheduling a time based event driven process (Lesaint, col. 3, lines 11-23, the system is conveniently arranged so that optimized schedules are generated periodically, the modification process making short term changes in between the generation of such schedules), comprising:

receiving status update information (col. 2, line 60 to col. 3, line 4, updating means for receiving, from the input means, updated information relating to the tasks and resources); adapting an initial schedule of the time based event driven process based on the status update information to thereby generate an adapted schedule (col. 3, lines 5-11, whereby changes to the initial schedules may be made in response to such updated information, independently of the schedule generation means), and modifying the adapted schedule to thereby generate a modified schedule for the time based event driven process (col. 2, line 60 to col. 3, line 28, and modifying

means for modifying the initial schedule of at least a first resource in response to such updated information, whereby changes to the initial schedules may be made in response to such updated information, independently of the schedule generation means).

Lesaint does not explicitly teach of modifying the schedule based on “historical information”. Kaufer teaches of schedule change tracked over time with predicting schedule dates and various trends in product development, for the purpose of tracking the schedule change over time and enabling the user to identify how the project deadline changed over time. It would have been obvious for a person ordinary skill in the art at the time the invention was made to modify the reference of Lesaint with historical information based line scheduling change of Kaufer for the purpose of tracking the schedule change over time and enabling the user to identify how the project deadline changed over time.

Per claims 2, 12, and 22, the method of claim 1 (11, and 21), wherein the status update information is received from a remote device. The reference of Kaufer teaches of the limitation in col. 2, lines 54-68 (The system further comprises Remote Managers 30, which are programs that run on workstations from which data is collected).

Per claims 3, 13, and 23, the method of claim 1 (11, and 21),, further comprising outputting the modified schedule for the time based event driven process (Lesaint, col. 14, lines 9-14, the output from the pre-scheduler 30 is the tour created up to that point which schedules the most tasks).

Per claims 4, and 14, the method of claim 3 (13, and 23), wherein the modified schedule for the time based event driven process is output to a client device (Lesaint, col. 7, lines 30-40, the input/output port 25 connects the computer to the telecommunications system which provides the communication links between the computer X and the hand held terminals, and col. 31, lines 24-41).

Per claims 5, 15, and 25 the method of claim 3 (13, and 23), wherein the modified schedule for the time based event driven process is output using a smart card (Lesaint, col. 7, lines 30-40, the input/output port 25 connects the computer to the telecommunications system which provides the communication links between the computer X and the hand held terminals).

Per claims 6, 16, and 26, the method of claim 1 (11, and 21), wherein at least one of the steps of adapting an initial schedule and modifying the adapted schedule are performed using one or more scheduling rules (Lesaint, col. 25, lines 21-40, new tasks entering the system, or changes to the scheduling and allocation rules, such as a change to travel times to account for adverse weather or traffic conditions).

Per claims 7, 17, and 27 the method of claim 1 (11, and 21), further comprising transmitting a request for current status information to a remote device, wherein the status update information is received from the remote device in response to the request for current status information being received by the remote device (see Kaufer et al, col. 2, lines 54-68, regarding the remote manager, and col. 3, lines 1-13, regarding the status information in response to the request,

accepting project information from the data collectors, and generating periodic reports and alerts regarding the status of the project).

Per claims 8, 18, and 28, the method of claim 1 (11, and 21), further comprising: determining if the status update information indicates that an event has been resolved within a window of opportunity associated with the event; and performing the steps of adapting and modifying only when the event has not been resolved within the window of opportunity (Lesaint, col. 4, lines 11-23, The system is conveniently arranged so that optimized schedules are generated periodically, the modification process making short term changes in between the generation of such schedules. This allows the schedule generation process more time to generate each schedule, allowing it to generate a more optimal solution, and/or use more data (e.g. further ahead in time) than would be the case if its run time were constrained by a need to track short term changes in real time).

Per claims 9, 19, and 29, the method of claim 1 (11, and 21), wherein modifying the adapted schedule based on historical information includes predicting whether another event will interfere with an event in the adapted schedule based on the historical information (See Kaufer, col. 10, lines 31-52, the schedule baseline history tables are updated when a baseline changes. and Accordingly, in addition to tasks, the overall prediction date for each schedule is also stored in a schedule predictions table.).

Per claims 10, 20, and 20, the method of claim 1 (11, and 21), further comprising:

determining if two or more events of the modified schedule may be combined; and combining the two or more events into a combined event if it is determined that the two or more events may be combined. The reference of Lesaint does not teach of combining two events when it is determined that events of modified schedule can be combined. Lesaint teaches of a system that optimized schedules are generated periodically in order to allow to give the schedule generation process more time to generate each schedule. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to combine changes when they are allowable for the reason to give the schedule generation process more time to generate each schedule.

Per claim 24, the apparatus of claim 23, wherein the output device is a display device that displays the modified schedule for the time based event driven process. The system of Lesaint teaches of displaying the changes schedule in col. 31. lines 24-41, (This may generate a display of the allocation for use by a human dispatcher to pass the instruction on to the technician T, or by transmitting a data message directly to the technician's handset (e.g. H1) over the communications link C. The revised schedule details are stored in the databases 42, 43, 44 (step 1216). For the technician register 43 these detail the current location of the technician, and the predicted completion time (i.e. the time at which the technician is next expected to come on-line requesting new instructions).

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US. Pat. No. 6,016,478, Zhang et al., Filed Aug. 13, 1996.

US. Pat. No. 6721713, Guheen et al., Filed, May 27, 1999.

US. Pat. No. 6615166, Guheen, et al., Filed, May 27, 1999.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose voice telephone number is (703) 308-6903. A voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:

**Commissioner of Patent and Trademarks**  
**Washington, D.C. 20231**

**Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).** All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.

**All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052.** Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.  
Majid Banankhah

6/11/04

  
MAJID BANANKHAH  
PRIMARY EXAMINER